

Marine Biosecurity in the Bay of Plenty



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In BOP currently managing 3 Marine Pest Species

- Mediterranean fan worm (*Sabella spallanzanii*)
- Clubbed tunicate (*Styela clava*)
- Asian paddle crab (*Charybdis japonica*)
- Also looking out for a range of other pest species, haven't arrived yet



FANWORM



STYELA SEA SQUIRT






ASIAN PADDLE CRAB



A portion of the Tauranga Harbour Biosecurity Dive Surveillance

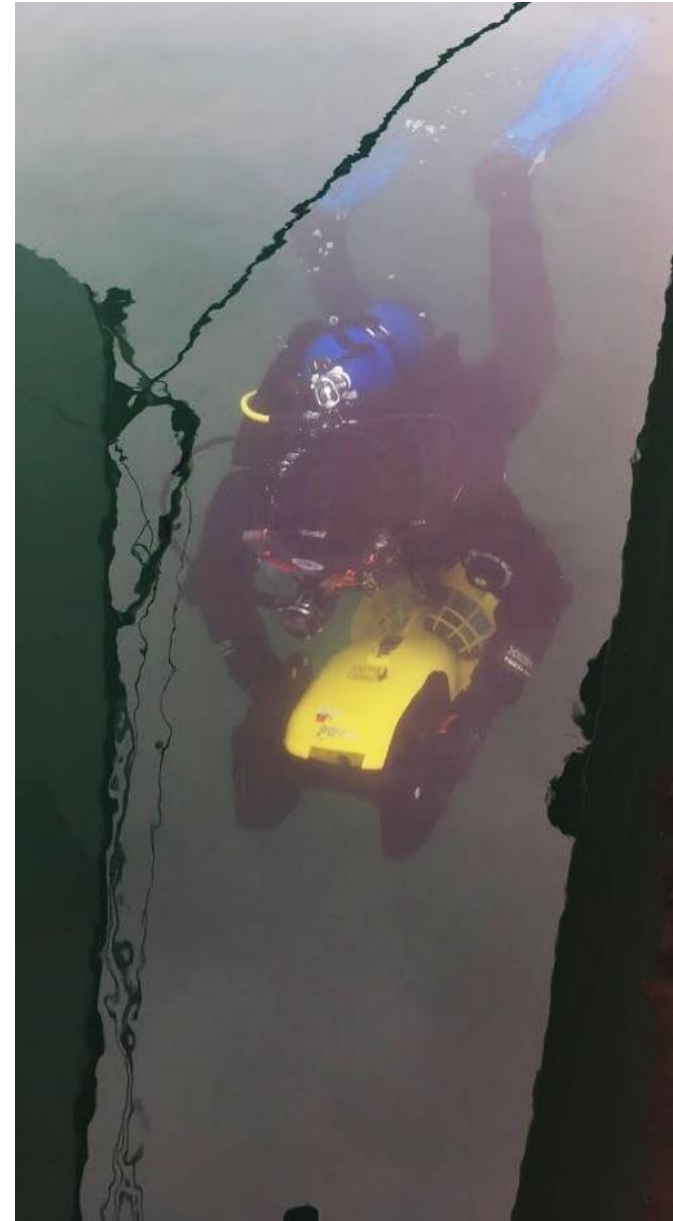
- All sites in BOP are ranked according to their likelihood of receiving Marine Pests.
- Marinas surveyed three times a year, port and moorings twice a year, other sites once each year.
- Bridge Marina give us a list of recent arrivals each week to check.
- Vessel works arrivals.



KEY	
	Marina (Surveyed 3 times each year)
	Area surveyed
	Moored vessels

On average each year the BOPRC Dive team inspect

- 4500 Boat hulls
- 45 km Marina pontoons
- 180 mooring blocks
- 1250 wharf piles
- 2720 hours of Dive surveillance



Surveillance in the Eastern BOP

- In the Eastern BOP the Council Dive team monitor Ōhiwa Harbour and the Whakatāne river and their moored vessels.
- We also plan to survey Whakatoea mussel farm.
- To date *Charybdis* is the only Marine Pest we have found in the Eastern BOP .



Mediterranean fan worm (*Sabella spallanzanii*)

- One of worlds most invasive marine pests
- Threat to Biodiversity and Aquaculture
- Reached New Zealand in early 2008
- Large population in Auckland, Whangarei and Coromandel harbours
- Easily spread by fouled boat hulls
- Rapid growth 25-50mm per month (NZ)
- September 2013 first detected in Tauranga harbour.



Sabella found in BOP 2019-2020

Location	Sabella found	Vessels with Sabella
Bridge Marina	135	5
Sulphur point Marina	2	1
Demolition wharf	663	0
Pilot bay	43	3
TOTAL	843	9

- All fanworm were removed by divers
- All vessels with fanworm were cleaned
- Demolition wharf incursion likely occurred due to an in water clean



The Asian paddle crab (*Charybdis japonica*)

- Invasive paddle crab
- Aggressive, predated on native crabs and shellfish
- High reproduction rate
- First found in NZ in 2000, Tauranga Harbour in Jan 2018
- *Charybdis* have become established in Northland, Auckland and Coromandel. Currently there is only limited trapping for research in these areas.



2019-2020 BOP Charybdis Surveillance

Location	Traps set	Charybdis removed
North Tauranga Harbour	90	6
Central Tauranga Harbour	299	25
South Tauranga Harbour	246	11
Ōhiwa Harbour	176	4
TOTAL	811	46

- In the first 18 months only caught 8 *Charybdis* in Tauranga Harbour, from 1200 traps
- *Charybdis* numbers in the Tauranga Harbour have grown considerably in the last year.
- Ōhiwa Harbour *Charybdis* represent a further range extension of this species.



Charybdis Surveillance in Ōhiwa Harbour

- *Charybdis* likely spread to Ohiwa Harbour via larval dispersal
- Each yellow pin = 2 traps, red pins show 4 *Charybdis* found (including 2 near Oyster farm)



Where to from here for *Charybdis*

- There has never been a successful eradication of *Charybdis* from any Harbour in the world
- It is unlikely that trapping alone will reduce the population to a manageable level in the Bay of Plenty.
- Given this MPI will not be funding any control efforts moving forward.
- BOPRC are keen to work with local kaitiaki both in Tauranga Moana and Ōhiwa Harbour to help with further detection and control efforts.



Questions?



**Clean below?
Good to go**

Clean hulls help stop
the spread of marine pests

